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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,717	02/16/2001	Vijitha Weerackody	29	4259

7590

08/03/2004

Thomas Stafford
4173 Rotherham Court
Palm Harbor, FL 34685

EXAMINER

TRAN, THIEN D

ART UNIT PAPER NUMBER

2665

DATE MAILED: 08/03/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/785,717

Applicant(s)

WEERACKODY, VIJITHA

Examiner

Thien D Tran

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30-33 is/are allowed.
- 6) ☒ Claim(s) 1,2,9,14,15,17,18 and 25 is/are rejected.
- 7) ☒ Claim(s) 3-8,10-13,16,19-24 and 26-29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 9, 14, 15, 17, 18, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (U.S Patent No. 6,459,679 B1).

Regarding claims 1, 14, 17 Kim discloses an apparatus for use in an Orthogonal Frequency Multiplexing (OFDM) based transmission system comprising:

a encoder 110 (differential encoder) that generates a corresponding encoded output symbol from a corresponding input symbol, col.1 lines 34-40, phase values of the input symbol and the prescribed previous output symbol are the same, col.6 lines 63-65;

an inverse fast Fourier transform unit that generates inverse fast Fourier transform versions of output symbols from said encoder, col.1 lines 35-40; and

an inverse discrete Fourier transform unit that generates inverse discrete Fourier transform versions of said inverse fast Fourier transform versions of said encoder output symbols as transmit data symbols, col.1 lines 35-40,

whereby phase values are not describe in the system as sent from the transmitter to the receiver (transmit data symbols are not required to be transmitted to a

remote receiver for said receiver) to generate received versions of said input symbols corresponding to said transmit data symbols.

Kim does not disclose that the encoder including a multiplier for multiplying the input symbol with a prescribed previous output symbol from the encoder. However, it would have been obvious to one having ordinary to have a modulation comprising a feedback line used by the multiplier for multiplying current data symbols with a previous prescribed signal so that so that the phase values of the input symbol and the prescribed previous output symbol are the same and having the similar feature of Kim, col.4 lines 63-65.

Regarding claims 2, 15, 18 Kim discloses that each output symbol (prescribed previous output symbol) from the encoder is a $T(V^{\text{th}})$ previous encoder output symbol, where $T > 1$, col.6 lines 55-65.

Regarding claims 9, 25 Kim discloses including a transmit output control responsive to a reference signal (control signal) for controlling transmission of OFDM symbols, col.5 lines 30-35, a phase sequence selection processor supplied with said inverse discrete Fourier transform versions for generating said control signal to enable transmission of an OFDM symbol in accordance with prescribed criteria, figure 1.

Allowable Subject Matter

3. Claims 30-33 are allowed.

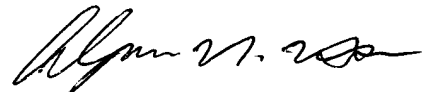
4. Claims 3-8, 10-13, 16, 19-24, 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (703) 308-4388. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thien Tran



ALPUS H. HSU
PRIMARY EXAMINER